

ON QUEENSLAND AND OTHER AUSTRALIAN
MACRO-LEPIDOPTERA, WITH LOCALITIES, AND
DESCRIPTIONS OF NEW SPECIES.

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In the following paper the classification followed is that laid down in Mr. Meyrick's papers.

RHOPALOCERA.

HETERONYMPHA AFFINIS, n.sp.

♂♀. 45-55 mm. Head black. Palpi brown, white underneath, grey at base. Antennæ cinnamon-brown, clavelli darker, tipped with cinnamon-brown. Thorax brown, posteriorly on dorsum rich black hairs, underneath light brown. Abdomen rich brown, with freely scattered black hairs, light brown underneath. Forewings narrowly triangular, costa bowed in middle third, apex rounded, hind margin oblique, slightly wavy, rich cinnamon-brown with a deep black bordering enclosing all the ground colour spots or cells. These cells are as follows, three costal, 1st in ♀ sub-lunar, from near costa at $\frac{1}{2}$ outwardly to centre of wing—in the ♂ this is divided transversely through centre by a narrow black line, and the outer half is attenuated as a narrow curved line to near base of wing; 2nd from $\frac{2}{3}$ costa elongated diagonally for half the distance toward middle of hind margin; 3rd a rounded spot just before apex; at the inner angles of 2nd and 3rd blotches is a round mark, white in ♀, yellow-brown in ♂; between this and hind margin is a small ground colour spot, and another immediately below it; from near base to $\frac{3}{4}$ inner margin, but divided

by its own width from inner margin, is a broad rounded-off bar; and between this and dots on hind margin is a large oval blotch contracted in the centre; the basal portion of the wing and especially the costal portion is thickly covered with dark brown hairs: cilia brown and black. Hindwings, basal and inner portions dark, colour as forewings; a deep black dentated bordering from basal portion divides wing, to near apical angle of costa, into two series of brown spots or cells—the anterior or costal portion is divided by black lines into two large cells and two supplementary cells; the hind portion is divided into four helmeted cells; the innermost is small and almost obscured by adpressed dark brown hairs; the 2nd contains an ocellus, consisting of a white centre dot, a deep black ring, a narrow brown ring and a narrow black ring from within outwards; the 3rd is divided by a broad black lunular band; the 4th is simple; there is a fine submarginal black line crossed by the black bar lines dividing the margin ground colour into 5 crenulated cells; the anal one linearly elongated round anal margin; cilia brown tinted with black. In ♂ a linear ground colour line runs along costal side of inner margin band, and curves to join first costal blotch which is curved and contracts in centre at point of junction. Cells in hindwing in ♂ smaller and more obscured by diffused black-brown.

This species differs from *H. Banksii*, Leach, in its larger size, deeper colour, greater profusion of black, and in having only 7 spots instead of 10 in forewing. There is no costal bar as in *H. Banksii*. The band of black in hindwing stretches uninterruptedly across, while in *H. Banksii* it is irregular and narrower. The ocellus in *H. affinis* consists of more rings than that of *H. Banksii*.

Gippsland, Victoria.

LYCÆNIDÆ.

LYCÆNA ATTENUATA, n.sp.

♂♀. 14-17 mm. Head, thorax, and abdomen brownish-black. Palpi grey. Antennæ finely annulated, brown and white.

Forewings, costa rounded, apex rounded, hindmargin obliquely rounded, purple-blue freely dusted with grey-black scales; costal border and hindmarginal border suffused with grey-black, deeper at apex of wing, narrowed toward anal angle. Hindwings as forewings, with a well-defined narrow grey-black border round whole contour of wings semi-translucent, allowing some of the underside spots to be seen through; ♀ as ♂, but larger and more suffused with purple-blue, grey-black border deeper and better defined. Undersurface grey-white; in forewings a circular row of seven black dots, three along and near costa, four from near apex of hindmargin to near centre of wing, a small discoidal spot in centre, in hindwings there is a circular line of black dots from base to $\frac{3}{4}$ expansion of wing, three along costa, one near costa at $\frac{2}{3}$, five diagonally toward inner border at $\frac{1}{2}$, and two or three along inner border; a diffused discoidal spot in centre, and two or three spots nearer base in a line with second dot on costa; a narrow grey suffused line near hindmargin of all wings.

Mountains near coast in S.E. Queensland. Allied to *Lycena exilis*, Luc., and *L. Lysimon*, Hüb.

A most delicate insect, and perhaps the smallest of all the Australian butterflies.

SESIADÆ.

SEZIA ISOZONA, Meyr. Brisbane, Maryborough.

SEZIA CHRYSOPHANES, Meyr. Bowen.

ARCTIADÆ.

EXOTROCHA LIBORIA, Cr. Brisbane.

♂. CALAMIDIA SALPINCTIS, Meyr. Brisbane; and

♀. CALAMIDIA HIRTA, Meyr.—are doubtless, as Meyrick conjectured, one species. I obtained both sexes at Moe in Gippsland, Victoria, and at passion fruit flowers in Brisbane.

SCOLIACMA BICOLOR, Boisd. Brisbane, Drouin; Gippsland, Melbourne.

SCOLIACMA ORTHOTOMA, Meyr. Brisbane; Frankstone, near Melbourne.

SCOLIACMA IRIDESCENS, n.sp.

♂♀. 20-22 mm. Head, palpi, antennæ and thorax cinnamon-brown. Abdomen grey mixed with cinnamon-brown. Forewings elongate, dilated, cinnamon-brown, irrorated with suffusions of purplish-brown, costa arched, hindmargin rounded; a suffusion of purplish-brown on costa from $\frac{1}{5}$ to $\frac{1}{2}$, narrowly so along apical angle, and broadly so on inner margin from $\frac{1}{5}$ to $\frac{2}{3}$ for one-third the width of the wing: cilia brownish-grey. Hindwings light ochreous brown, lightly clouded with scattered smoky-grey; cilia ochreous-brown. Under surface of forewing in centre, and of hindwings overlapped by forewings, dark smoky-brown, almost black.

Brisbane, in deep scrub; rare. Allied to *S. cervina*, from which it differs in its iridescent colouring, and in the scant and lighter smoky colouring of under side of wings.

SCOLIACMA CERVINA, n.sp.

♂♀. 20-22 mm. Head, palpi, antennæ, thorax and abdomen fawn colour. Legs light brown. Forewings elongate, costa gently rounded, hindmargin very obliquely rounded, fawn colour: cilia fawn colour. Hindwings and cilia light ochreous-fuscous. Under surface of forewings to $\frac{1}{3}$, and costal half of hindwings to $\frac{3}{4}$ or nearly to notched apex smoky-black.

This is by far the darkest species of this genus yet described from Australia.

Brisbane; rare.

TIGRIODES SPLENDENS, n.sp.

40 mm. Head orange. Palpi and antennæ black. Thorax orange, patagia and dorsal tuft posteriorly blue-black. Abdomen ochreous-yellow. Legs yellow. Forewings elongate, costa slightly rounded, apex acute, hindmargin rounded, orange-yellow tinted with red; markings blue-black, costa for $\frac{1}{5}$ black;

in middle of costa a broad bar to half across wing, then expands toward base to $\frac{1}{3}$, forming a clavate figure towards inner margin; from $\frac{3}{4}$ costa to anal angle a line cuts off the triangle on apex of wing—which is blue-black, with an oblong ovate yellow spot at apex of wing: cilia black. Hindwings ochreous-yellow; cilia ochreous.

Mackay (Mr. Ronald Turner).

TIGRIONES TRANSCRIPTA, n.sp.

♂♀. 18-20 mm. Head, palpi, antennæ, thorax and abdomen light brown. Forewings narrow, elongate, costa gently arched, hindmargin rounded, light brown, with freely scattered fuscous scales; markings in many specimens indistinct, smoky-brown, 1st line from a dot in costa at $\frac{2}{5}$, angulated towards hindmargin and through two irregular dots to $\frac{2}{5}$ inner margin; 2nd line from dot in costa at $\frac{2}{3}$, irregularly and often denticulate, to $\frac{4}{5}$ of inner margin: cilia light brown. Hindwings and cilia light brown.

Brisbane; rare.

TIGRIONES NANA, Walk. Brisbane.

TIGRIONES SPILARCHA, Meyr. Brisbane; Melbourne.

TIGRIONES PULVERULENTA, n.sp.

♂♀. 24 mm. Head, palpi, antennæ, thorax and abdomen light grey fawn. Forewings narrow elongate, costa gently rounded, hindmargin oblique, slightly rounded, ochreous-brown with numerous fawn coloured scales aggregated on basal half of inner half, and apical half of costal half of wing: cilia ochreous-brown. Hindwings brownish-ochreous; cilia ochreous.

Allied to *T. spilarcha*, from which it differs in smaller size, uniformity of colour and absence of markings.

Brisbane; rare.

TEULISNA DASYPYGA, Feld. Daintree River.

BRUNIA HARPOPHORA, Meyr. Brisbane, Cooktown.

BRUNIA REPLETA, n.sp.

♂♀. 21-25 mm. Head, palpi, antennæ ochreous - fuscous. Thorax and abdomen greyish-ochreous. Forewings elongate, dilate, costa gently arched, hindmargin obliquely rounded, ochreous-brown, tinged with cinnamon-ochreous from near base, gradually getting lighter ochreous toward hind margin: cilia brown ochreous. Hindwings and cilia light brown ochreous.

Brisbane; rare.

BRUNIA FRAGILIS, n.sp.

♂♀. 14 mm. Head, palpi, antennæ, thorax and abdomen creamy-ochreous. Forewings elongate, somewhat dilated, costa gently arched, hindmargin obliquely rounded, pale straw or pale ochreous: cilia pale ochreous. Hindwings and cilia pale straw, lighter than forewings.

Brisbane; rare.

BRUNIA REPLANA, Lw. Brisbane.

BRUNIA INTERSECTA, n.sp.

♀. 32 mm. Head, palpi and thorax creamy-ochreous. Antennæ grey. Abdomen in specimen wanting. Forewings elongate, dilate, costa arched, hindmargin rounded, creamy-ochreous; a purplish dark grey band from costal half of base of wing, filling centre third of wing, upper border from costa at $\frac{1}{10}$ to near costa at $\frac{2}{5}$ where it forms a prominent angle, thence abruptly to near middle of wing at $\frac{7}{8}$, thence reflected forming an angle to costa just before apex; under border from base in centre of wing to near inner border at $\frac{3}{4}$, then reflected as an angle to inner border, veins on this band black, a sub-marginal line of black angular

dots, bounded by a light ochreous fine line and by a deep black hindmarginal fine line: cilia purple-grey. Hindwings yellow-ochreous, hindmargin near apex, black with short fine transverse black lines; cilia yellow-ochreous, near apex purple-grey.

Queensland. In Museum collection, Brisbane; believed to be from North Queensland.

LITHOSIA CHIONORA, Meyr. Brisbane.

LITHOSIA UNICOLOR, n.sp.

♂♀. 28 mm. Head, palpi ochreous-yellow. Antennæ light brown. Thorax ochreous-yellow. Abdomen ochreous-brown. Forewings elongate, moderately dilated, costa gently arched, hindmargin obliquely rounded, light ochreous-yellow: cilia ochreous-yellow. Hindwings and cilia as forewings, in some specimens a little lighter.

Brisbane.

SIMMETRODES NITENS, Walk.

♂. Described by Meyrick, P.L.S.N.S.W. He says he identified my three specimens from Walker's description only, and may be mistaken. Walker's descriptions are very meagre, and several species are superficially very similar in appearance. I obtained more specimens and I believe ♀ at Dunwich, Stradbroke Island. The ♀ is slightly larger, and is a light straw colour, some specimens shaded with brown.

Dunwich, near Brisbane.

HETERALLACTIS EUCHRYSA, Meyr. Brisbane.

CALLIGENIA PYRAULA, Meyr. Port Douglas.

CALLIGENIA CYCLOTA, Meyr. Port Douglas, Cairns.

CALLIGENIA MELITAUULA, Meyr. N. Queensland.

CALLIGENIA STRUCTA, Walk. Dunwich, Brisbane (Rev. — Ash); N. S. Wales.

HECTOBROCHA PENTACYMA, Meyr. N. Queensland.

HECTOBROCHA MULTILINEA, n.sp.

♂♀. 25-32 mm. Head and antennæ ochreous. Thorax ochreous, collar and base of patagia black. Abdomen ochreous, terminal segment in ♀ black at base. Legs ochreous, femora and tibiæ barred with smoky-black. Forewings oblong, broadly dilate, costa rounded, apex obtuse, hindmargin rounded, inner margin gently sinuous, ochreous; costa for $\frac{2}{5}$ in ♂, $\frac{1}{5}$ in ♀ black, six sinuous freely dentate transverse black bars from costa to inner margin black; 1st near base of costa to base of inner margin, 2nd from $\frac{1}{5}$ costa to $\frac{1}{4}$ inner margin; 3rd in ♂ close beyond and parallel, in ♀ from $\frac{2}{5}$ costa to just before $\frac{1}{2}$ inner margin, 4th and 5th close and parallel from near $\frac{3}{4}$ costa to near $\frac{4}{5}$ inner margin, 6th sub-marginal; there are discal and discoidal spots, one between the 2nd and 3rd bars, and one sometimes divided transversely into two between 3rd and 4th bars: cilia ochreous. Hindwings ochreous with a broad smoky-black hind-marginal fascia, extending from just below apex to $\frac{2}{3}$ toward anal angle; discoidal spots faint or absent; cilia ochreous. Brown hairy larvæ on rocks; probably feed on lichens.

Brisbane.

HECTOBROCHA SUBNIGRA, n.sp.

♀. 32 mm. Head light fawn colour. Palpi black. Antennæ, thorax and abdomen, light smoky-fawn colour. Forewings elongate, dilate, costa arched, apex rounded, hindmargin rounded, smoky-fawn colour with markings of smoky-black; dot at base, one at inner margin close to base, a larger one in centre near base, and a narrow mark between this and costa black; fine line on costa to $\frac{1}{2}$ black; there are four rounded angular zig-zig lines, 1st from $\frac{1}{4}$ costa to $\frac{1}{4}$ inner margin; 2nd from just before $\frac{1}{2}$ costa to just before $\frac{1}{2}$ inner margin, these are united by four transverse lines, or touchings of their angles, and contain a black dot at $\frac{1}{3}$

from costa ; at same distance from costa just before $\frac{2}{3}$ is a larger black dot ; 3rd line from $\frac{2}{3}$ costa to $\frac{2}{3}$ inner margin ; 4th line from $\frac{1}{5}$ costa to $\frac{1}{5}$ inner margin—these two lines with suffusion of smoky-black in the angles form a fascia, with the lighter ground-colour in middle and more towards inner margin ; sub-marginal line very angulated or deeply toothed, lighter than other lines and forming dots round anal angle : cilia smoky-fawn colour. Hindwings and cilia same colour as forewings, with broad smoky suffused sub-marginal band, not touching margin, from costa to anal angle.

Brisbane ; one specimen. November ; dense scrub.

NEOBROCHA PHAEOCYRA, Meyr. N. Queensland.

TERMESSA GRATIOSA, Walk. Brisbane.

TERMESSA CONGRUA, Walk. Brisbane.

TERMESSA CONOGRAPHIA, Meyr. Brisbane, Maryborough.

ZIA TACTALIS, Walk. Rockhampton.

THRYPTICODES XYLOGLYPTA [Meyr. MS.], n.sp.

♂♀. 24-26 mm. Head ochreous-grey. Palpi long, white-grey. Antennæ smoky-grey. Thorax and abdomen brownish-grey. Forewings elongate, triangular, costa rounded, apex obtuse, hind-margin rounded, brown or ashy-grey, irrorated with darker grey scales, and brown, chocolate and black often variable markings ; a dark spot from costa near base nearly to inner margin, a brown rhomboid blotch from costa at $\frac{2}{3}$ for one third towards anal angle of hind margin, a thin sub-lunar line from costa immediately beyond, nearly along costa, minute brown spots along costa to near apex, a small suffused blotch of brown scarcely touching hind margin at $\frac{1}{4}$; a suffused brown border along whole inner margin ; a black bar, more or less suffused, from hindmargin just before anal angle, one-third toward base and angle obliquely to inner

margin at $\frac{3}{5}$: cilia brown and grey. Hindwings whitish-grey, darker suffusion near hindmargin; a cluster of brown-grey hairs just before $\frac{1}{2}$ costa; cilia whitish-grey.

Brisbane.

Mr. Meyrick kindly named this species for me.

SAROTRICHA UNDULANA, Hb.

I have taken fourteen specimens of a *Sarotricha* at Brisbane, which Mr. Meyrick considers to be *S. undulana*. This is a British species, and naturally led to the idea that it must be a mistake. But my specimens are certainly not English. They were taken at light. I hope to obtain more and better marked specimens next season, and so enable Meyrick to confirm his opinion or, what I believe will rather be, to find this to be a new allied species. Of course it may be an introduced species. I do not know its food plant. But an English moth is hardly likely to establish itself so near the tropics and not in Tasmania, N. Zealand, Melbourne or Sydney.

SAROTRICHA DEMIOTA, [Meyr. MS.] n.sp.

♂♀. 20-24 mm. I sent Meyrick what appeared to be two species of this genus. He has returned them both named as above. The one type is a blue-grey with black lines, the other is a brown-grey, with black lines and brown and black spots and blotches. Head grey. Palpi blackish-grey. Antennæ grey. Thorax grey, some specimens with darker collar, and bounding black line. Abdomen grey—easily greases. Forewings and costa slightly rounded, hindmargin rounded, grey or grey and brown interspersed. In some specimens basal fourth dark grey-black, with black lines and border, many short black dots on costa, several in basal half reaching to centre of wing; one irregular sinuous denticulate line from costa at $\frac{3}{4}$ to $\frac{3}{4}$ inner margin, in some specimens a deep black or brown spot on costa, a sub-marginal

line just beyond fainter, irregular and toothed ; in some specimens a dark discal spot near centre of wing at $\frac{2}{3}$; in some suffusions of rust colour, brown near centre of wing and costa ; in some only irregular pencillings at irregular distances, and for varied lengths transversely across wing : cilia grey. Hindwings white-grey or brown-grey, with smoky suffusion towards apical half of hindmargin ; cilia grey.

Brisbane.

If Meyrick's determination be right, a most variable moth.

SAROTRICHIA PUNCTATA, n.sp.

♂♀. 26 mm. Head, palpi creamy-grey. Antennæ grey. Thorax smoked-grey, two black dots in front, four immediately behind, and three posteriorly. Abdomen brownish-drab. Forewings with costa gently rounded, hindmargin rounded, creamy-grey suffused in patches with smoky-drab and brown, and covered with deep black dots ; a dot at base in centre, one at $\frac{1}{5}$ costa and from this a series of spots more or less united to $\frac{1}{6}$ inner margin ; a dot at $\frac{1}{3}$ inner margin ; an angular spot at $\frac{2}{5}$ costa, further angled to a dot on middle of wing at $\frac{2}{5}$ —thence interrupted to a dot at $\frac{1}{2}$ inner margin ; a dot beyond $\frac{1}{2}$ costa, and in a line of interrupted dots to $\frac{3}{5}$ inner margin ; a conspicuous spot at $\frac{3}{4}$ costa, thence an irregular zigzag grey line $\frac{2}{3}$ inner margin, a fine line at $\frac{5}{6}$ costa, and a line often divided into two dots at apex of costa, thence as a zigzag interrupted line of dots to just before anal angle of inner margin, a sub-marginal row of fine dots on veins : cilia grey. Hindwings grey becoming browner toward hindmargin and there forming a suffusion of brown ; cilia grey.

Brisbane ; 4 specimens.

SOROCOSTIA MESOZONA, [Meyr. MS.] n.sp.

♂♀. 15 mm. Head in some specimens snow white, in others grey. Palpi, antennæ grey. Thorax white. Abdomen grey.

Forewings elongate-triangular, costa gently arched, hindmargin rounded, white with scattered grey scales, and rich brown markings; a broad central fascia, not touching costa at middle, to middle of inner margin, with dots or short marks of black-brown, one or two or three brown dots, irregular, near base, a line of finely defined black dots just before central fascia, two or three faint dots near costa before apex, a sub-marginal line of dots: cilia grey. Hindwings white; cilia grey.

Brisbane; rare. Mr. Meyrick has kindly named this species for me.

SOROCOSTIA AULACOTA, Meyr. Brisbane.

SOROCOSTIA ARGENTEA, n.sp.

♂♀. 11-14 mm. Head, palpi, antennæ, and thorax silvery white, Thorax grey, covered more or less with silvery white. Forewings elongate-triangular, costa rounded, hindmargin obliquely rounded, grey-white with freely scattered silvery scales, costal edge finely grey, tufts at $\frac{2}{5}$ and $\frac{3}{5}$, sub-costal black with raised silvered scales—two small black dots, one between the 1st tuft and inner margin, the other at $\frac{1}{5}$ and a little distant from inner margin, surrounded by silvered scales; in some specimens the veins show grey, and there is a grey sinuous zigzag line from apex of costa to just before anal angle of inner margin, but in most specimens these are obscured by the silvery scales: cilia white. Hindwings and cilia greyish-white.

Brisbane; rare.

SOROCOSTIA CYCOTA, Meyr. Brisbane.

SOROCOSTIA LEUCOMA, Meyr. Brisbane.

SOROCOSTIA INTERPERSA, n.sp.

♂♀. 13-18 mm. Head dark grey, face white, palpi and antennæ grey-white. Thorax grey, patagia darker grey. Abdomen grey,

base of segments smoky-grey. Forewings oblong, dilate, costa rounded, hindmargin oblique, scarcely rounded, white-grey, with markings of grey and lines of smoky-grey; 1st line from $\frac{1}{6}$ costa to $\frac{2}{3}$ toward inner margin, space within this line to the base more or less suffused with grey and bounded on inner margin with two smoky dots; 2nd line $\frac{1}{3}$ costa to $\frac{1}{2}$ inner margin, costal half dentate, inner half finer dotted; 3rd line from $\frac{2}{3}$ costa to $\frac{3}{4}$ inner margin, finely and frequently dentate, broader in centre, and containing with 2nd line a grey space and a smoky-grey angulated or lunar discal line; 4th line immediately beyond and parallel to 3rd line dentate, intervening space white-grey; beyond this line are three smoky-grey dots in costa, with an apical greyish suffusion; costa grey and smoky-grey. Hindwings white-grey with irregular suffusion of smoky-grey; cilia grey.

Brisbane.

NOLA LUGENS, Walk Brisbane, Cooktown; Melbourne.

NOLA METALLOPA, Meyr. Brisbane; Melbourne.

MOSODA JUCUNDA, Walk. Brisbane, Gayndah, Duaranga.

MOSODA BANCROFTI, n.sp.

♂♀. 18-21 mm. Head, palpi and antennæ black, collar reddish-brown. Thorax black. Abdomen orange-brown, terminal segment black above, orange-brown on under side. Legs black, middle tibiæ and posterior femora and tibiæ light orange-brown. Forewings elongate, costa arched, apex rounded, hindmargin obliquely rounded; purplish-black, with five rounded orange-brown spots; first on inner margin at $\frac{1}{4}$, 2nd on costa $\frac{2}{3}$, 3rd obliquely beyond this, on middle third of wing, touching 2nd and sometimes confluent, 4th touching anal angle of hindmargin, and 5th touching costa, just before apex: cilia black. Hindwings orange-brown with black border, deep at apical angle, but becoming attenuated to a mere line at anal angle of hindmargin; cilia black.

Brisbane ; dense scrub ; September, flying in sunshine. I have much pleasure in naming this species after Dr. T. L. Bancroft, who has given me much assistance in collecting.

MOSODA VENUSTA, n.sp.

♂♀. 18 mm. Head reddish-ochreous. Palpi dark smoky-grey. Antennæ smoky-grey, lighter towards extremity. Legs ochreous-brown. Thorax black, dotted anteriorly with reddish-ochreous. Abdomen black, anal tuft ochreous. Forewings elongate-triangular, costa moderately arched, hindmargin obliquely rounded, reddish-ochreous with black bands edged with deeper red ; short bar on base of costa joins a spot in centre of base of wing, and joins a short bar at base of inner margin ; a deep band from $\frac{1}{2}$ costa to $\frac{2}{3}$ inner margin, once denticulate in centre on both borders ; a second band from $\frac{4}{5}$ costa to anal angle of hindmargin, sometimes diffused to apex and contracted opposite middle of hindmargin. Hindwings ochreous-red, darker than forewings, with a broad hindmarginal black band, broadest at apex.

Brisbane.

MOSODA SEJUNCTA, Feld. Brisbane ; Melbourne.

MOSODA LINEATA, n.sp.

♂♀. 14 mm. Head grey. Palpi brown. Antennæ smoky-grey. Thorax white with a black V-shaped mark on dorsum. Abdomen greyish-white. Forewings triangular, costa gently rounded, hindmargin nearly straight, grey-white with black-brown markings ; triangular dot on costa near base attenuated to base ; a narrow bar angulated in middle from $\frac{1}{3}$ costa to just before $\frac{1}{2}$ inner margin ; a bar at $\frac{2}{3}$ diffused to near apex of costa and narrowing to $\frac{3}{4}$ inner margin, sub-dentate ; an interrupted band on hindmargin ; costa black and grey. Hindwings and costa grey, darker grey toward margin, indistinct discal spot.

Brisbane ; 5 specimens. Near to *Mosoda servilis*.

MOSODA SERVILIS, Meyr. Toowoomba ; Melbourne.

SCAEODORA RAVA, n.sp.

♂♀ 12-15 mm .Head, palpi, antennæ, thorax, abdomen and legs fuscous-grey. Forewings elongate, dilate, costa rounded, apex and hindmargin rounded, brown-grey with a few scattered darker scales ; costal line darker, with a dark triangular spot near apex ; lines excepting sub-marginal faint smoky-grey ; 1st from $\frac{1}{4}$ costa to $\frac{1}{4}$ inner margin ; 2nd from $\frac{1}{3}$ costa to $\frac{1}{3}$ inner margin, in some specimens these two lines enclose a dark suffusion, a well defined discal spot at $\frac{2}{3}$, one-third from costa ; 3rd line from $\frac{3}{5}$ costa, convex to hindmargin to $\frac{1}{2}$ inner margin ; 4th line or sub-marginal line, a series of dark brown dots on the veins ; marginal line fine : cilia light grey and brown. Hindwings light whitish-brown, marginal line darker brown.

Brisbane.

This is a larger species than *S. omophanes*, Meyr., which I discovered at Frankstone, Victoria. It may have to be made into a new genus, but provisionally I have retained it here.

CHIRIPHE MONOGRAMMARIA, Walk. Brisbane, Toowoomba.

CHIRIPHE DICHOTOMA, Meyr. Brisbane.

CHIRIPHE DICTYOTA Meyr. Brisbane, Toowoomba.

CHIRIPHE ANGULISCRIPTA, n.sp.

♂♀. 20 mm. Head white. Palpi and antennæ black. Thorax black in front, white behind, with white epaulettes, banded with black line at base. Abdomen smoky-grey, anal tuft creamy-ochreous. Forewings elongate, costa rounded, hind margin oblique, straight, white, markings black ; costal spot near base, extended half way to inner margin ; six irregular lines or

interrupted dots; an oblique spot on costa at $\frac{1}{5}$ from near which 1st line curves outward to $\frac{1}{4}$ inner margin; an irregular triangular spot on costa at $\frac{1}{2}$ from the centre of which 2nd line bends sharply toward base of wing and then abruptly turns to $\frac{1}{2}$ inner margin, where it is suffused into a large spot, and receives third line from a point short of costa at $\frac{3}{4}$; 3rd line waved; at $\frac{4}{5}$ costa is an oblong spot, from which proceeds 4th line to near anal angle of inner margin, and fifth line which joins 6th or hindmarginal line near anal angle: cilia white, with darker spots. Hindwings smoky-grey; cilia grey.

Brisbane; September, October; on fences. Allied to *C. dictyota*.

THALLARCHA PHALAROTA, Meyr. (T. PHAEDROPA, Meyr.).

The latter is but the ♀ of the former, consequently the name *phaedropa* must drop; several pairs taken *in cop*.

Brisbane; November: Myrtleford and Melbourne, Victoria.

THALLARCHA AURANTIACEA, n.sp.

♂. 16 mm. Head black, face orange. Palpi orange. Antennæ black. Thorax and abdomen black. Forelegs black; femora and tibiæ of middle legs ochreous-yellow; posterior legs ochreous-yellow. Forewings elongate, costa rounded, hindmargin obliquely rounded, black, iridescent with purple; second fourth of wing transversely orange: cilia black. Hindwings orange, with a rich black border round inner and hindmargin, and broadened at apex of costa; cilia black.

Brisbane; September; dense scrub.

COMARCHIS EQUIDISTANS, n.sp.

♂. 25 mm. Head ochreous. Palpi black. Antennæ grey. Thorax black, anterior edge finely ochreous and an oval oblong spot

posteriorly on dorsum ochreous, patagia entirely black. Abdomen ochreous, dorsum of middle segments and dorsum and sides of posterior segments black, anal segment ochreous. Forewings elongate, costa gently rounded, hindmargin obliquely rounded, ochreous with red toward inner margin: 5 black equidistant transverse bars, 1st near base and 5th just before hindmargin, 2nd, 3rd and 4th equidistant between: cilia ochreous. Hindwings ochreous-red, with broad marginal smoky-grey fascia, divided from before centre to apex of hindmargin; sub-marginal division lighter; cilia smoky-ochreous.

Toowoomba (Mr. Boyd).

COMARCHIS GRADATA, n.sp.

♂. 30 mm. Head and face ochreous, crown of head streaked with black. Palpi black. Antennæ grey. Thorax black, three ochreous dots anteriorly. Abdomen black, base of segments narrowly ochreous, anal tuft ochreous. Legs grey, under surface ochreous. Forewings elongate-triangular, costa nearly straight, apex acute, hindmargin rounded, ochreous, markings black; 1st narrow bar at base of wing; 2nd from $\frac{1}{4}$ costa to $\frac{1}{4}$ inner margin, narrowing on costa as costal line to basal bar; 3rd from $\frac{1}{2}$ costa to $\frac{3}{4}$ inner margin, bars 2 and 3 united by bar in middle, forming roughly the letter H; 4th bar $\frac{3}{4}$ costa to just before anal angle of inner margin, a short bar crosses this at $\frac{1}{3}$ from costal margin and projects half way to hindmargin, with short denticulation on opposite side, a 2nd cross-bar nearer inner margin reaches to hindmargin; hindmarginal line narrowly black: cilia black. Hindwings ochreous, with broad hindmarginal black fascia, narrowing toward anal angle; cilia black.

Toowoomba (Mr. Boyd).

COMARCHIS STAUROCOLA, Meyr. Brisbane.

COMARCHIS SPARSANA, Walk. Brisbane; Melbourne.

COMARCHIS IRREGULARIS, n.sp.

♂♀. 20 mm. Head, face, and antennæ white. Palpi very short, black. Collar black. Thorax black. Abdomen reddish-ochreous. Forelegs blackish-brown, underside reddish-ochreous; posterior legs reddish-ochreous. Forewings elongate-triangular, costa rounded, hindmargin obliquely rounded, creamy white, with fuscous-brown lines and fasciæ. Costal line fuscous-brown, broad at base and touching inner margin near base, and attenuated to $\frac{1}{2}$ costal—a line from point of this costal line at $\frac{1}{2}$ costa, irregularly dentate to $\frac{1}{3}$ inner margin; a 2nd line from same point on costa, irregularly dentate, to $\frac{1}{2}$ inner margin, enclosed space between these two lines reddish-ochreous and more or less suffused with rich fuscous-brown; a 3rd line from $\frac{3}{4}$ costa rounded to just before anal angle of inner margin, space between this and hindmargin fuscous-brown—except spot at $\frac{3}{4}$ hindmargin creamy white; the 2nd and 3rd lines are joined by a short line just below centre of wing; discal spot on first line near costa, or sometimes absorbed in 1st line: cilia brown and white. Hindwings reddish-ochreous, with diffusion of smoky-black at apex, narrowly attenuated to just before $\frac{1}{2}$ hindmargin; cilia light ochreous.

Brisbane; rare. Allied to *aspectatella*, but is larger, and fasciæ lie obliquely inwards, and are differently arranged.

COMARCHIS OBLIQUATA, n.sp.

♂♀. 14 mm. Head, and dorsum of thorax ochreous; face, palpi, antennæ, sides of thorax, abdomen ochreous-fuscous. Legs brownish-ochreous. Forewings elongate, costa rounded, hindmargin obliquely rounded, inner margin sinuate, whitish-ochreous; markings fuscous, a narrow costal line from base to $\frac{2}{3}$, extended at base interruptedly or continuously to inner margin; a line just below costa at $\frac{1}{4}$, enclosing a suffused grey to costa and obliquely to posterior end of costal line; 1st line from $\frac{2}{3}$ costa obliquely to $\frac{1}{3}$

inner margin irregular, sparsely denticulate; 2nd line from $\frac{1}{3}$ costa obliquely to $\frac{2}{3}$ inner margin, denticulate, enclosed space between 1st and 2nd lines suffused with fuscous-ochreous, and irrorations of black, and holding a small black discoidal spot almost touching 1st line; 3rd line from apex of costa to anal angle of inner margin, sinuous, suffused near apex and broadly so at anal angle; fuscous spot in middle of hindmargin encloses with 3rd line an ochreous space crossed by dark fuscous veins; cilia ochreous with spots of fuscous. Hindwings ochreous-grey, darker grey towards hindmargin; cilia ochreous with grey spots.

Melbourne; Brisbane. Near *C. staurocola*.

COMARCHIS ASPECTATELLA, Walk. Brisbane.

COMARCHIS LUNATA, n.sp.

♂♀. 16 mm. Head and face white, palpi black, antennæ grey. Thorax black, anteriorly and posteriorly white. Abdomen yellow-ochreous. Forewings elongate, dilate, costa gently rounded, hindmargin oblique, straight, covered with dark fuscous, excepting a white lunule from near base to near middle of inner margin, a white band from $\frac{3}{4}$ costa to $\frac{3}{4}$ inner margin divided obliquely near inner margin into two by bar, and 5 dentate white marks on hindmargin; small black discal spot edged with ochreous near centre of wing. Hindwings yellow, with smoky-grey fascia from apex attenuated towards hindmargin.

Brisbane.

ANESTIA INQUINATA, n.sp.

♂. 19-20 mm.—♀. probably apterous. Head ochreous-grey, line between antennæ grey. Palpi short, black. Antennæ ochreous, pectinations grey. Thorax ochreous-grey, lined anteriorly, laterally and posteriorly with black lines. Abdomen ochreous. Forewings elongate-triangular, costa slightly rounded, apex rounded, hindmargin obliquely rounded; light fuscous with lighter scattered

scales; semicircular spot in centre of inner margin creamy-ochreous, a second spot irregularly rhombic obliquely from 1st, and touching costa fuscous-grey, often indistinct; in some specimens two small creamy dots on inner margin at $\frac{1}{3}$ and just before anal angle: cilia fuscous. Hindwings orange, bordered with brown fascia, deep at apical angle but attenuated to a line to just before anal angle; cilia grey.

Brisbane.

ASURA LYDIA, Don. Brisbane; Melbourne.

ASURA CERVICALIS, Walk. Brisbane; and Victoria near the coast.

ASURA AURATA, var.

This appears to be a climatic variety of *A. cervicalis*; it is smaller, and while the southern type is intensely black this is intensely orange. In a large series the markings, though somewhat variable, are, relatively speaking, alike in the two types.

SPILOSOMA BRISBANENSIS, n.sp. (included with *S. fuscinula*, Walk.).

♂♀. 35-41 mm. Head reddish-fuscous. Palpi and antennæ black. Thorax fuscous with central and lateral black stripes from behind collar. Abdomen rose-red, with dorsal, lateral and ventral rows of black spots. Legs black, femora rosy, fuscous above. Forewings, costa slightly rounded, hindmargin rounded; in ♂ ochreous, in ♀ fuscous; markings black, a well defined bar on basal third, in some specimens filling basal half of costa; discal spot near costa at $\frac{1}{2}$, a black line on inner side of lower median vein occupying middle third very narrow in ♀, in some ♂ specimens duplicated, in a very few trebled; a narrow bar from near base close to and parallel to inner margin, interrupted in the third fourth, and often only a dot in ♀ in basal half; near $\frac{4}{5}$ costa are two small contiguous spots, and just below opposite to median line are two other smaller dots; from apex to near angle of hindmargin

a series of short longitudinal bar spots ; in ♀ a second series runs diagonally from apex of hindmargin to $\frac{3}{4}$ of inner margin. In many specimens some or nearly all markings absent. Hindwings rosy, large discal spot, broad fascia close to and parallel with hindmargin, more or less interrupted in ♂, rarely interrupted in ♀.

This species is I am persuaded quite distinct from the following, *S. quinquefascia*. I have seen about 200 specimens from Brisbane neighbourhood and they are all constant as follows :—the markings of the inner $\frac{2}{3}$ of the forewings are sparse, being confined to the central *longitudinal* bars, the transverse fasciæ found in the next species are absent, the markings of the outer third hardly form into fasciæ, being short and more or less separated bars. The fascia of the hind wing is separated from the hindmargin by a well-defined border. The tendency is to sparsity of markings ; the ♀ is *always* fuscous.

SPILOSOMA QUINQUEFASCIA, n.sp. (included in *S. fuscinula*, Walk.).

The distinguishing feature in this species is the transverse fasciæ of the forewings, of which there are five ; 1st is near the base, and consists of short bars or joined into a contiguous band ; 2nd from $\frac{1}{3}$ costa to near $\frac{1}{4}$ and thence in a curve to $\frac{1}{3}$ inner margin, in some specimens narrowly interrupted ; 3rd from $\frac{2}{3}$ costa twice waved outwards and from median obliquity to $\frac{1}{2}$ of inner margin, generally united to discal spot ; 4th from $\frac{4}{5}$ costa to $\frac{4}{5}$ inner margin, in some specimens interrupted once or oftener in middle third ; 5th on hindmargin, in some frequently interrupted, often covering hindmarginal line ; in ♂ these fasciæ are often more or less confluent, in ♀ they are more deeply banded and give the insect a rich black appearance, often almost to leaving only lines of ground colour. The basal costal bar often curves into 2nd fascia. The thorax is often entirely black. The fascia of the hindwing is broader than in *S. Brisbaneensis*, and leaves only a narrow hindmarginal line of ground colour.

Meyrick in his monograph description of *S. fuscinula* appears to have included both species. I have a long series of *S. quinquefascia* from Victoria, and they are quite distinct from the Brisbane species. It is difficult to say to which type the name of *S. fuscinula* was first given. Both have evidently been included. I would suggest the more descriptive name *S. quinquefascia* for those from the south with the transverse bars.

AREAS MARGINATA, Walk. Brisbane, Gippsland.

DEIOPEIA PULCHELLA, L. Brisbane, Australia generally.

HYPSIDÆ.

NYCTEMERA AMICA, White. Brisbane to Melbourne.

NYCTEMERA TERTIANA, Meyr. Port Douglas to Brisbane.

NYCTEMERA CRESCENS, Walk. Port Douglas to Mackay.

NYCTEMERA SEPARATA, Walk. Cape York to Mackay.

NYCTEMERA CRIBRARIA, Cl. Cape York to Brisbane.

AMERILA ASTREAS, Drury. Cape York,

AMERILA BRACHYLEUCA, Meyr. Cooktown to Brisbane

AMERILA SERICA, Meyr. Rockhampton and Gayndah.

AMERILA RUBRIPES, Walk. Cooktown to Brisbane.

HYPSA BASILISSA, Meyr. Cooktown and Cairns.

HYPSA DAMA, F. Cape York to Mackay.

HYPSA PLAGIATA, Walk. Bowen to Brisbane.

HYPSA CARICÆ, F. Cape York to Mackay.

HYPSA AUSTRALIS, Boisd. Mackay (Turner).

HYPSA NESOPHORA, Meyr. Brisbane; N. S. Wales.

HYPSA CHLOROPYGA, Walk. Cape York to Mackay.

DIGAMA MARMOREA, Butl. Duarina to Brisbane.

SYNTOMIDIDÆ.

AGAPHTHORA MELANORA, Meyr. Cape York.

AGAPHTHORA SPHENODES, Meyr. Cairns.

HYDRUSA ECLIPTIS, Meyr. Cooktown and Port Douglas.

HYDRUSA STELOTIS, Meyr. Cooktown.

HYDRUSA PYRRHODERA, Meyr. Cape York to Port Douglas.

HYDRUSA ANGUSTIPENNA, n.sp.

♂♀. 19-25 mm. Head and palpi black. Antennæ black. Thorax black. Collar orange-red. Abdomen yellow or orange, base of segments black, anal segment entirely black. Forewings elongate-triangular. Costa straight, apex rounded, hindmargin very obliquely rounded, black, spots 4, small in ♂, moderate in ♀, yellow, translucent, dividing wing into fifths: 1st basal fifth ground colour; 2nd two spots, costal one triangular, inner one lunular, nearly extending to anal angle; 3rd fifth ground colour; 4th fifth two spots, inner one divided by sub-median vein, sub-costal one also divided and sometimes into three in ♀: cilia brown-red. Hindwings scant, less than half expansion of forewings, black with one central orange-red spot; cilia brown-red.

Coast nr. Brisbane.

HYDRUSA HYALOTA, Meyr. Cape York.

HYDRUSA LEUCACMA, Meyr. Cooktown to Brisbane.

HYDRUSA CYANURA, Meyr. Brisbane.

HYDRUSA ANTITHETA, Meyr. Gayndah.

HYDRUSA PARAULA, Meyr. Cooktown to Brisbane.

HYDRUSA ANEPSIA, Meyr. Cooktown.

HYDRUSA PYROCOMA, Meyr. Rockhampton.

HYDRUSA SYNEDRA, Meyr. Rockhampton.

HYDRUSA HESPERITIS, Meyr. Cape York.

HYDRUSA MACROPLACA, Meyr. Brisbane ; Sydney.

HYDRUSA NESOTHETIS, Meyr. Brisbane ; Murray R.

HYDRUSA APERTA, Walk. Queensland ; N.S. Wales.

HYDRUSA ANNULATA, F. Cooktown to Maryborough.

HYDRUSA INTENSA, Butler. Cooktown to Brisbane.

HYDRUSA PHEPSALOTIS, Meyr. Maryborough.

HYDRUSA ESCHATIAS, Meyr. ? Queensland.

HYDRUSA BICOLOR, Meyr. Cairns.

CHOROMELES GEOGRAPHICA, Meyr. Rockhampton to Brisbane.

CHOROMELES STREPSIMERIS, Meyr. Bowen.

EUCHROMIA POLYMENA, L. North Australia.

EUCHROMIA IRUS, Cr. Cape York and Cooktown.

ZYGÆNIDÆ.

HESTIOCHORA XANTHOCOMA, Meyr. Duaringa.

PROCRIS CORONIAS, Meyr. Maryborough.

PROCRIS SUBDOLOSA, Walk. Cape York to Brisbane ; Melbourne.

PROCRIS VIRIDIPULVERULENTA, Guér. Duaringa ; Melbourne.

BOMBYCES, Family LIPARIDÆ.

TEARA BARNARDI, n.sp.

♂♀. 38 mm. ♂. Head ferruginous-brown. Antennæ drab-brown, pectinations long. Thorax ferruginous-brown with tufts

of cream-coloured hairs, a small tuft enveloping root of each antenna. Abdomen black, terminal segment and anal tuft of hairs ferruginous-brown. Forewings triangular, dilate, costa rounded at base, thence obliquely straight, apex and hind margin rounded, grey-white, with fuscous markings; a narrow line extends along costa from base to $\frac{1}{3}$; from end of this obliquely to middle of inner margin is the 1st broad bar of fascia; from just before apex of costa a second rounded bar, symmetrical with hindmargin, spans the wing to $\frac{1}{3}$ inner margin, beyond this a sub-marginal line; this is united along veins with 2nd bar by short lines, and forms eight ground-coloured spots between the lines: cilia same colour as markings, fulvous. Hindwings grey-fuscous, with a darker shade bar just before middle of wing, and a 2nd at $\frac{3}{4}$, both symmetrical with hindmargin—the latter is edged by a darker line, shot with ferruginous, enclosing eight cream-coloured spots; cilia cream-colour.

♀. Head and thorax deep ferruginous-brown. Antennæ drab-brown, pectinations $\frac{1}{2}$ length of those in ♂. Forewings ochreous-yellow, dusted freely with chocolate-brown; markings deep chocolate-brown; the brown dustings become a line on costa from $\frac{1}{3}$ to apex, and they almost become a suffusion in middle of wing from base to first bar of fascia: 1st bar from $\frac{2}{3}$ costa to $\frac{1}{2}$ inner margin, 2nd bar from $\frac{5}{6}$ costa to $\frac{5}{6}$ inner margin, sub-marginal fine line—between line and 2nd bar are lines separating eight ochreous-yellow spots: cilia chocolate-brown with small ochreous-yellow points. Hindwings and cilia dark fulvous with light ochreous-yellow spots near hindmargin, and yellow points in cilia.

Duaringa, Queensland.

The sexes of this moth are widely different. They were bred from a batch of caterpillars by Mr. Barnard of Duaringa, after whom I am pleased to name the species.

TEARA ARGENTOSA, n.sp.

♂. 38, ♀. 46 mm. Head and thorax cream colour, long hairs on head and thorax creamy-white. Antennæ brown. Forewings

elongate, dilate, costa nearly stright, hindmargin obliquely rounded, cream colour, freely irrorated with silver and sparingly dusted with ochreous-brown; markings faint, light ochreous-brown; discal spot near apex of cell small and often indistinct; a bar or fascia from $\frac{4}{5}$ costa to $\frac{3}{4}$ inner margin, more distinct in ♂ than in ♀; a sub-marginal denticulate line, united by dentations (sometimes indistinctly marked) with a marginal line, and enclosing ground colour dots: cilia cream colour. Hindwings cream colour in ♂, light brown in ♀, a faint suffusion near base, a band from $\frac{3}{4}$ costa to $\frac{3}{4}$ inner margin, a sub-marginal and a marginal line on hindmargin light ochreous-brown; the sub-marginal and marginal lines are connected by short lines and enclose spots of ground colour; these marks are faint and more of a light brown in ♀; the long hairs on inner margin are light brown; cilia cream colour.

Duaringa, Queensland. (Mr. Barnard).

TEARA PROTRAHENS, n.sp.

♂♀. 27-30 mm. Head, palpi, antennæ ochreous-brown. Thorax ochreous-brown. Abdomen ochreous-brown, base of each segment black, terminal tuft ochreous-brown. Forewings elongate-triangular, with costa rounded, hindmargin very obliquely rounded, grey irrorated with brown and black scales; very large discal spot beyond $\frac{1}{2}$ and near costa, creamy colour with centre shade of brown; a sub-marginal row of eight cream colour spots and interrupted cream colour marginal line, in ♀ a line, in ♂ a broader band and ochreous: cilia ochreous and brown. Hindwings smoky-black: in ♂ cream colour row of hindmarginal spots, reduced in ♀ to three small ochreous dots next apical angle; cilia in ♂ ochreous, in ♀ smoky-brown and ochreous. The ♂ is in general appearance lighter than ♀.

Brisbane; rare.

PORTHESIA (EUPHROSTIS) COLLUCENS, n.sp.

♂♀. 26-34 mm. Head snow-white. Palpi ochreous. Antennæ mid rib white, pectinations ochreous-grey. Thorax snow-white.

Abdomen white, but hairs short, scattered, easily rubbed off, and showing ochreous-brown body colour. Forewings triangular, dilate, with costa rounded, hindmargin obliquely rounded, and inner margin rounded; snow-white; raised shining silvery lines give the appearance of corrugations, eight or nine of these stretch from near, but not touching inner border, rising at equal distances along the margin, the first four or five reach to cell, the others diagonally and irregularly reach to just before costa; the veins are more or less silvered white: cilia snow-white. Hindwings plain snow-white; cilia snow-white.

This beautiful species can best be described as imitative of water marked snow-white silk.

Brisbane, a pair in 1888.

BOMBYCES, Family SATURNIDÆ.

ANTHERÆA INTERMEDIA, n.sp.

♂. 125-160, ♀. 130-170 mm. Head and palpi red-brown. Antennæ brown. Thorax red-brown, collar *conspicuously white*. Abdomen red-brown. Forewings broadly triangular, costa arched, apical half and apex rounded, hindmargin sinuous and obliquely rounded, *red-cinnamon-brown*. Costal band continuous with collar, attenuated to just before apex, slaty-purplish, freely dusted with grey and white on border, browner towards apex; large black blotch at termination of costal band; a short bar of chocolate-brown $\frac{1}{8}$ to $\frac{1}{4}$ inch long near $\frac{1}{3}$ costa, *not touching costal band, no white on inner side*; a larger bar of like colour from $\frac{1}{4}$ inner margin for two-thirds across wing to opposite $\frac{1}{6}$ costa; *a double bar* from $\frac{3}{5}$ inner margin to just before the black blotch near apex of costa, inner bar deep chocolate-brown, outer bar slaty or purplish-brown, bars wavy, and space between ochreous-brown; a circular discal ring occupying middle third between outer bar and costa deep chocolate, finely edged with white on inner margin nearest costa, translucent spot in middle a mere round dot; a broad hindmarginal ochreous-brown

band, apex suffused red centred with ochreous-white: cilia ochreous-brown. Hindwings coloured as forewings; a rich chocolate waved and curved bar from $\frac{1}{4}$ costa to $\frac{1}{3}$ inner margin, thence along inner margin to second bar which reaches from $\frac{3}{4}$ inner margin and in a curved line gradually nearing margin to $\frac{5}{6}$ costa; a marginal band bordering inner and hindmargins ochreous-brown, as in forewings; discal rings broadly black, with a blue and black line edging inner margin nearest base of wing, and occupying the middle third of space between the two chocolate bars—translucent spot a fine dot only; cilia as forewings. On the underside of wings fuscous and smoke-coloured scales are dusted thickly between discal ring, costa and outer bar, forming a suffusion over forewings and over all excepting middle third of hindwings. The double bar becomes a crimson-red band along inner half of forewings. The hind band alone is seen on hindwings, of which the inner third is crimson-red, whence it is gradually suffused with smoky-brown.

The species of *Antheraea* are in many cases very variable. *A. janetta* varies exceedingly. So does *A. eucalypti*. Other species are less variable. Many are closely allied in general appearance. It is only from a study of the creatures in nature, and from a long series of specimens, that we can hope to define the various species. *A. intermedia* comes very near to *A. eucalypti*. The caterpillar is much more gaudily coloured in the former. *A. eucalypti* is much more generally distributed. I have found it from Melbourne to Cooktown. *A. intermedia* is found in the Gippsland zone. I found it 800 to 1000 feet high in Gippsland. The Gippsland fauna comes down to sea-level at Brisbane. This evidently proves that the rainfall has more to do with the locale of many species than the differences of heat and cold. I have obtained scores of Lepidoptera in Gippsland at 800 to 1200 feet, and in Brisbane at sea-level only. The cocoon of *A. intermedia* is larger, more silky and shining than that of *A. eucalypti*. The relative size of the sexes is more nearly alike in *A. intermedia*. The colour is constant in *A. intermedia*. It varies from grey, brown, drab, cream, fulvous, &c., in *A. eucalypti*. The triangular white blotch on the costa in *A. eucalypti* is absent in *A. intermedia*.

The collar is snowy-white, and not dirty grey-white as in *A. eucalypti*. The marginal lines on both wings and the double bar with the intermediate suffusion distinguish *A. intermedia*. But the most striking character is the distance of the discal rings from the bars. In *A. eucalypti* they touch, or nearly touch, the diagonal transverse bar in the forewings, and almost touch the single bar and suffusion in the hindwings. In *A. intermedia* they are conspicuously and constantly distant. *A. intermedia* appears to approach more nearly to a species which feeds on *Loranthus*, and which I have not yet been able to determine.

Gippsland and Brisbane.

GEOMETRINÆ, Family GEOMETRIDÆ.

PROBLEPSIS CLEMENS, n.sp.

♀. 40 mm. Head and collar blackish, lower half of face white. Palpi blackish-grey. Antennæ whitish-ochreous. Thorax and abdomen white. Legs ochreous above, white beneath. Forewings triangular, costa gently arched, hindmargin obliquely rounded; snow-white; lines or narrow bars across wing water-grey, 1st line $\frac{1}{4}$ costa to $\frac{1}{3}$ inner margin; 2nd line rounded near costa, but not touching costa, at $\frac{3}{5}$ to $\frac{2}{3}$ inner margin; 3rd line narrower, symmetrical with 2nd line from $\frac{3}{4}$ costa to $\frac{1}{5}$ inner margin; 4th line a row of small circular spots between veins, lighter on inner half, sub-marginal line just beyond this, fine and indistinct; marginal line very fine and distinct; a small discal spot just before 2nd line, subtended by a short indistinct line or suffusion and surrounded by a suffusion of silvery scales, a few sparsely scattered silvery scales toward apex, and others crowded along 2nd line toward inner margin, and just before inner margin as a broad suffusion to first line at $\frac{1}{4}$ from inner margin: cilia snow-white. Hindwings with hindmargin rounded, snow-white; a very narrow linear transverse discal spot margined on inner side with silvery scales, lines as in forewings, excepting that first line is wanting; suffusion of silvery scales in a space bounded by a line from $\frac{1}{3}$ inner margin through

discal spot to near apical angle of hindmargin, and by inner and hindmargins, suffusions very thick near inner border, more sparse and scattered toward hindmargin; cilia snow-white.

One specimen; Brisbane.

Appears to come nearest to *P. sancta* of the Australian species.

IODIS SPECIOSA, n.sp.

♀. 32 mm. Head green, fillet green. Palpi brown, terminal joint white. Antennæ light brown. Thorax bright pea-green, with a conspicuous dorsal white posterior spot. Abdomen green, with a white dot on dorsum of each segment; lower half of sides, undersurface and anal segment white. Forewings with costa arched, hindmargin rounded and crenulated, rich pea-green, thinly scaled; a white dot in costa near base, a second at $\frac{1}{6}$, a third at $\frac{1}{3}$, other minute white dots, indistinct, irregularly toward apex; a white dot at $\frac{1}{2}$ inner border; an indistinct row of white dots from $\frac{3}{5}$ costa to $\frac{3}{5}$ inner margin; a few minute white dots scattered irregularly on inner margin and on veins all over the wing, and more conspicuous white dots on apices of hindmarginal crenulations: cilia green and white. Hindwings with hindmargin rounded, bent at vein 4, and crenulate, rich pea-green, minute white dots with difficulty detected sparingly scattered over wing, apices of crenulations of hindmargin white; cilia green and white.

Taken by Mr. Turner near Mackay. Allied to *I. iosticta*, Meyr.

AGATHIA ASTERIAS, Meyr. Brisbane; one specimen.

AGATHIA LÆTATA, Fabr.

One specimen of this Indian species taken at Brisbane by Mr. Wild, in Museum collection, not previously recorded from Queensland.

HYPOCHROMA VIRIDICATA, n.sp.

♂. 45 mm. Head grey with dots of green, crown green. Palpi grey. Antennæ light brown, shortly pectinated. Collar reddish-

brown. Thorax grey-green, epaulettes blue-green. Thorax grey-green, sides and anal tuft reddish-ochreous. Forewings, costa slightly wavy, apex rounded, hindmargin rounded, rich green, freely interspersed with grass green, and dots of darker green; markings green-black and reddish-brown; a narrow line near base; a 2nd rounded line from a large spot at $\frac{1}{3}$ costa to $\frac{1}{4}$ inner margin; a large spot at $\frac{3}{5}$ costa and a line within this running to 2nd line at $\frac{1}{3}$ and ending in a blotch which covers discoidal spot; 3rd line from $\frac{3}{4}$ costa, dentate, curved outward and at $\frac{1}{3}$ inward to $\frac{1}{2}$ inner margin; 4th line from $\frac{4}{5}$ costa to $\frac{4}{5}$ inner margin, these two lines joined in the centre by a conspicuous black bar; 5th line irregular and interrupted, just beyond 4th; 6th line marginal: cilia grey-green. Hindwings as forewings; markings as forewings but 2nd and 3rd brown or black near centre of wing, veins brown and green, inner margin broadly reddish-ochreous; cilia brownish-green. Undersurface, forewings red-ochreous, discoidal spot black, bar from near $\frac{5}{8}$ costa to near anal angle narrowed in centre, deep red with spots of black near centre, a black comma mark in centre of wing at $\frac{1}{3}$. Hindwings as forewings, discoidal spot red; between this and outer broad band is a line from $\frac{3}{5}$ costa to centre of wing—all marks on hindwings cinereous-red.

Brisbane; in dense scrub; November; very rare. A very fine species. Allied to *H. hypochromaria*.

HYPOCHROMA MACULATA, n.sp.

♀. 44-46 mm. Head brown or grey. Palpi black. Antennæ brown. Thorax brown or grey, with 3 or 4 small black dots on either side of basal segments. Forewings triangular, dilate, costa straight, apex rounded, hindmargin rounded, light brown or light grey, with darker markings and spots; small dots along whole length of costa, with a large one at $\frac{1}{4}$, one at $\frac{1}{2}$, one at $\frac{3}{4}$ and one at $\frac{5}{8}$; a row of suffused dots near the base, a 2nd row of irregular suffused dots at $\frac{1}{3}$ costa in a circle to $\frac{1}{4}$ inner margin, a discal spot in centre of cell, more or less in a line of suffusion

with dot at $\frac{1}{2}$ costa to a dot at $\frac{1}{3}$ inner margin; a broad fascia of suffused darker ground colour from between dots at $\frac{3}{4}$ and $\frac{5}{6}$ costa to space between $\frac{1}{2}$ to $\frac{3}{4}$ inner margin, a darker blotch near hindmargin of this in centre, and another near inner margin; a submarginal interrupted crenulate line; a row of black hindmarginal dots between veins: cilia brown or grey. Hindwings marked as forewings, with small, faintly marked discal spot; under-surface light-ochreous with large black discal spot in forewings, small in hindwings; 1st line at $\frac{1}{3}$ costa or $\frac{1}{3}$ inner margin, faint; median line beyond discal spot at $\frac{1}{2}$ costa angled and thence to near $\frac{1}{2}$ inner margin, both lines wanting or faintly marked on hind wings. Very broad and smoky-brown hindmarginal fascia through both wings, touching hindmargin in forewings near the middle and in several points near anal angle, and in hindwings at apical and anal angles.

Mackay (Mr. Turner). Two specimens; one is grey, the other is fuscous-brown, but all the markings are alike.

HYPOCHROMA TURNERI, n.sp.

♀. 36 mm. Head and palpi greenish-ochreous. Antennæ greenish-grey. Thorax brown with tufts of green hairs. Thorax ochreous-drab. Forewings, costa nearly straight, hindmargin crenulate, rounded, ochreous-green shaded with purplish-grey suffusions and markings; a dark chocolate or blackish denticulate median line at $\frac{2}{3}$ costa, angularly toward hindmargin, thence straight for $\frac{1}{4}$, and thence obliquely to $\frac{1}{2}$ inner margin; another line less distinct at $\frac{1}{3}$ costa, denticulate and rounded to $\frac{1}{5}$ inner margin; a broad purple-grey suffusion at base, narrowly separated into two blotches in centre, a second suffusion of same colour between chocolate lines along costa bordering either line, and filling space on inner $\frac{2}{3}$ of wing, this contains indistinctly marked discal spot; a narrow suffusion and a darker colour line diagonal to costa at $\frac{4}{5}$ costa, a green-purple bar from $\frac{3}{4}$ inner margin to middle of wing, thence diagonally to near hindmargin at $\frac{1}{4}$ from

apical angle, here it turns on itself and extends near hindmargin to anal angle; space included purple-grey, marginal line chocolate-grey: cilia brown, grey, and green. Hindwings as forewings, with a patch of reddish-ochreous on middle third of inner margin, and very indistinct discal spot or suffusion. *Undersurface* of wings ochreous shaded with purple-grey, from base to median line, discal spot on forewings conspicuous black with white suffusion toward median line and costa, discal spot on hindwings pale, indistinct; median line $\frac{2}{3}$ costa to $\frac{2}{3}$ inner margin on forewings, and in a line from beyond $\frac{1}{2}$ costa to $\frac{1}{2}$ inner margin hindwings. A broad grey-black fascia from costa just beyond median line, touching hindmargin near anal angle in forewings, and at apex and anal angle in hindwings.

Mackay; one specimen sent by Mr. Turner; after whom I have great pleasure in naming the specimen. This species is allied to *H. acanthina*, Meyr.

NOCTUÆ, Family ORTHOSIDÆ.

LEUCANIA AUREOLA, n.sp.

♂. 38 mm. Head, palpi, thorax and abdomen ochreous-brown. Antennæ ochreous above, smoky-brown beneath. Legs ochreous-brown. Bunch of long hairs on undersurface and centre of abdomen black. Forewings, costa rounded before apex, hindmargin rounded, ochreous-brown, with veins and finely lined subvenations reddish-brown; a strongly marked brown line midway through wing to $\frac{2}{3}$, parallel with inner margin; a small black discal spot almost touching this line just beyond $\frac{1}{2}$, another small spot just outside first, an oblique brown line from just before apex of costa becoming a suffusion to discal spot, an oblique brown line, suffused at apex, but narrowing into a series of dots to $\frac{3}{4}$ inner margin, a few other irregular indistinct suffused brown spots and dots, and grey-black marginal dots on veins: cilia ochreous-brown. Hindwings ochreous-brown, freely covered with smoky-brown scattered scales, which become a dark suffusion on hind half of wing; cilia

as forewings. Undersurface of all wings creamy-ochreous and covered with shining gold scales. Marginal dots on veins black.

Brisbane; rare; dense scrub; November.

LEUCANIA FUMATA, n.sp.

♂♀. 31-35 mm. Head smoky-grey. Palpi grey. Antennæ brownish-grey. Thorax white, smoky-grey anteriorly. Thorax ochreous-white. Forewings elongate, gradually dilate, with costal gently rounded, hindmargin rather obliquely rounded, milk white, shining, shaded irregularly with smoky-grey; small brown discal spot near centre of cell, often indistinct; veins bounding cell, and veins nearing hindmargin smoky-grey: cilia greyish-white. Hindwings grey-white, with broad band of suffused smoke colour on hindmargin, lighter toward anal angle; cilia as forewings.

Brisbane; rare.

I sent a specimen of this rare moth to Mr. Meyrick, who returned a note, *unidentifiable*. I presume it became greased in transit, to which it is very liable, and in which condition it would look worn and rubbed. In the fresh series, the shining wings, milky-white forewings shaded with smoke stains as it were, readily distinguish it from any other species with which I am acquainted.

PYRALIDINA, Family PYRALIDIDÆ.

BALANOTIS ARCTANDALIS, n.sp.

♂♀. 25-35 mm. Head orange. Palpi black, grey laterally. Antennæ ochreous-grey. Thorax green-grey, with two black dots in front, and two diamond-shaped black spots in centre and posteriorly across dorsum. Abdomen ochreous-orange laterally, green-grey on back, with a centre row of diamond spots and a row diagonally with these on either side, black, terminal tuft black with a shade of orange in centre. Legs green-grey and black, posterior pair on upper side orange on coxæ and femora,

and alternately orange and black on tibiæ. Forewings elongate-triangular, gently dilate, costa nearly straight, hindmargin rounded, green-grey, with marks and shadings of grey and black in various shades; spot in centre near base, a larger one at $\frac{1}{8}$ costa, a broader and diffused one immediately beyond on costa, a smaller just beyond in middle and one nearer base on inner margin—a broad fascia from $\frac{1}{3}$ costa deeply dentate to $\frac{1}{3}$ inner margin, widened at inner margin, a discal spot at $\frac{1}{2}$ near costa, a 2nd fascia at $\frac{2}{3}$ costa sinuous and dentate to $\frac{4}{5}$ inner margin, a broad suffusion from just beyond to apex, on inner half of wing narrowed to interrupted horseshoe dots, to anal angle of hindmargin; a sub-marginal line of deep black dots, a marginal black-grey line: cilia black-grey. Hindwings with hindmargin rounded, costa for $\frac{3}{5}$ and whole inner margin rich orange colour, rest of wings coloured as forewings but with more white: spot near base of costa orange, large spot in middle of wing at $\frac{1}{3}$, and a band from near costa just before sub-marginal spots on middle $\frac{2}{4}$ of wing, blue-white: a suffused line near base in centre and between costal orange and white, centre spot green-grey; a fascia at $\frac{1}{2}$ between orange bands and bounded faintly on either side with orange-black: a broad suffusion from apex of costa, breaks at $\frac{1}{4}$ into horseshoe spots on inner side of white band and expands in suffusion near anal angle, black: sub-marginal spots deep black; cilia as forewings.

Brisbane; rare; dense scrub.

This handsome species comes near *B. carinentalis*.

Postscript.—Since this paper left my hands I have come to the conclusion that it might perhaps be better to consider the foregoing species (*B. arctandalis*) as a well-marked variety of *B. didymalis*, Walk. It does not entirely agree with Walker's description in which the markings on the under side are said to be obsolete, whereas in my species (or variety) the under surface is rich orange, and the markings deep black.